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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/814,049      | 03/31/2004  | Yew Wee Cheong       | 111079-136357       | 5732             |

31817 7590 06/07/2006

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EXAMINER

SHAKERI, HADI

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3723

DATE MAILED: 06/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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|                              |                        |  |                     |  |
|------------------------------|------------------------|--|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> |  | <b>Applicant(s)</b> |  |
|                              | 10/814,049             |  | CHEONG, YEW WEE     |  |
|                              | <b>Examiner</b>        |  | <b>Art Unit</b>     |  |
|                              | Hadi Shakeri           |  | 3723                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 28-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____.  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.   | 6) <input type="checkbox"/> Other: ____.                                    |

**DETAILED ACTION*****Election/Restrictions***

1. This application contains claims 28-30 drawn to an invention nonelected without traverse in Paper No. 12/14/05. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

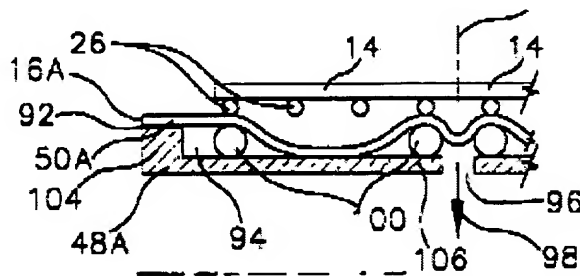
***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, 8-22, and 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Farnworth et al. (6,136,137).

AAPA, e.g., Figs. 1-3 and pages 2-4, meets all of the limitations of the above claims, except for disclosing the use of adhesive gel. Farnworth et al. teaches system and methods for dicing wafers in



which pressure sensitive adhesive tapes, or silicone gels (04:44). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the invention of AAPA with the use of silicone gel as taught by Farnworth to adapt the system for providing adhesion that permits ease of separation (04:41-43). Farnworth meets all of the limitations of the independent claims, e.g., gel material having membrane (50A).

Art Unit: 3723

4. Claims 7 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prior Art (AAPA as modified by Farnworth) as applied to claims 1 and 16 above, and further in view of Kataoka et al. (6,273,791).

Prior art as applied above meets all of the limitations, except for disclosing washing the wafer. Kataoka et al. discloses that typically in the producing IC semiconductors, wafers go through a step of washing. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the prior art invention with the step of washing to preparer the wafer for the next stage of production in view of Kataoka et al.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Response to Arguments***

6. Applicant's arguments filed March 16, 2006 have been fully considered but they are not persuasive.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

With regards to the combination as applied to the claims, the argument that the combination does not disclose an adhesive gel material having particles capable of allowing the adhesive gel to release the wafer and prevent substantial collapse when a vacuum is applied is not persuasive. Fig. 4 of the instant Application discloses an adhesive gel comprising an adhesive membrane (410) and particles (406) on one side of the membrane and in contact with the platform (414). The specification as originally filed define the particles to be organic, inorganic or synthetic and that they may be of a similar material to the gel material (404) or any suitable material known to one of ordinary skill in the art, in view of the disclosure. The rods as disclosed by Farnsworth in combination with the membrane meets the limitations as recited, i.e., the functional/narrative language "allowing...". The arguments regarding "wafer grinding" and/or the disadvantages of using Farnsworth is not relevant to the claims as recited. Claims are directed to a "method" which in various embodiments includes grinding, dicing and washing. Restriction/Election is not applied to the claims, as this time, since the point of invention appears to be a method of supporting a wafer during one or more processing stages.

It is also noted that claims amended to include positive limitations defining the invention, e.g., "...providing an adhesive gel material, said adhesive gel material including semi-solid particles within and further forming a membrane surface; applying said adhesive gel material to at least a portion a first side of a semiconductor wafer having first and second sides, the semi-solid particles within the adhesive gel material forming a structure to substantially prevent the membrane surface from collapsing when a vacuum suction is applied to the first side of the

Art Unit: 3723

semiconductor wafer, thus releasing the wafer; positioning..." would be allowable over prior art of record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hadi Shakeri whose telephone number is (571) 272-4495. The examiner can normally be reached on Monday-Friday.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Hadi Shakeri', with a stylized flourish at the end.

Hadi Shakeri  
Primary Examiner  
Art Unit 3723

May 29, 2006